

中国外来入侵植物的学名考证^{*}

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摘要: 基于中国外来入侵植物的相关报道和文献, 发现一些入侵植物的学名使用比较混乱, 一个物种存在两个或两个以上的名称。依据最新植物志资料, 对国内 30 种外来入侵植物学名进行了考证, 包括中名、基名(若存在)、异名、原产地以及在中国的分布等。

关键词: 入侵植物; 中国; 学名; 分类修订

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Nomenclatural Notes on Alien Invasive Vascular Plants in China

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Abstract: Based on literatures of invasive plants, the scientific names of thirty alien invasive plants in China are reviewed here, since more than one name were used for one species by different authors. The data from the floras updated were employed to compile the scientific name for each species. The vernacular name, basionym (if present), synonym(s) for each species, along with their distributions in China were provided.

Key words: Invasive plants; China; Scientific name; Taxonomic notes

1. *Ageratina adenophora* (Sprengel) R. M. King & H. Robinson, *Phytologia* **19**: 211. 1970^①; G. L. Nesom in *Fl. N. Amer.* **21**: 553. 2006. Basionym *Eupatorium adenophorum* Sprengel, *Syst. Veg.* **3**: 420. 1826 (Asteraceae).

Sticky snakeroot (破坏草^②), a native species of Mexico, introduced and naturalized in pantropical and pansubtropical as invasive in Canary Islands, Cambodia, India, Laos, Myanmar, Nepal, Indonesia, Philippines, Thailand, Vietnam, South Africa, Americas, probably all over SE Asia, Australia, Pacific islands, South China Sea Islands, and has been

introduced and naturalized in China since the middle of the nineteenth century: Chongqing, Guangxi, Guizhou, Hebei, Jiangxi, Sichuan, Taiwan and Yunnan. Here *Ageratina* is a restricted circumscription in a broad *Eupatorium*. It is commonly accepted as *E. adenophorum* in China (Li and Xie, 2002; Shi et al., 2004; Guan et al., 2006; Huang et al., 2006; Xu et al., 2006; Xu and Lu, 2006; Hu et al., 2007; Xie et al., 2007b; Liu et al., 2008; Tang et al., 2008; Yang et al., 2008; Zhou et al., 2008; Yang, 2009). However, it was also misidentified as *E. coelestinum* (Li et al., 2006; Ma et al.,

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① Y. L. Chen, T. Kawahara & N. Hind, Asteraceae in *Fl. Chin.* 20 (unpublished, online: http://flora.huh.harvard.edu/china/mss/volume20/Asteraceae-AGH-Eupatorieae_coauthoring.htm).

② 《中国植物志》英文版称其为破坏草, 但国内大多数学者称其为“紫茎泽兰”。

2009; *Conoclinium coelestinum* in *Flora of China*^③), which is native to North America, and sometimes been classified in the genus *Eupatorium*, especially *Ageratum* (*Ageratina* is the diminutive of *Ageratum*, Schmidt and Schilling, 2000), now has been cultivated and escaped in Guizhou and Yunnan of China.

2. *Alternanthera bettzickiana*^④ (Regel) G. Nicholson, Ill. Gard. Dict. 59. 1884; B. J. Bao, S. E. Clemants & T. Borsch in Fl. Chin. 5: 427. 2003. Syn. *Alternanthera versicolor* (Lemaire) Regel, Gartenflora. 18: 101. 1869 (Amaranthaceae).

Calico plant (锦绣苋), a native species found in South America, is treated as *Alternanthera versicolor* (Shan et al., 2006; Yan et al., 2007). Now it has been cultivated throughout Southeast Asia and China: Anhui, Beijing, Fujian, Gansu, Guangdong, Guangxi, Hainan, Hebei, Heilongjiang, Henan, Hong Kong, Hubei, Hunan, Jiangsu, Jiangxi, Jilin, Inner Mongolia, Liaoning, Macau, Ningxia, Qinghai, Shaanxi, Shandong, Shanghai, Shanxi, Sichuan, Taiwan, Tianjin, Xinjiang, Xizang, Yunnan and Zhejiang.

3. *Amaranthus blitum* Linnaeus, Sp. Pl. 1: 990. 1753; B. J. Bao, S. E. Clemants & T. Borsch in Fl. Chin. 5: 421. 2003. Syn. *Amaranthus lividus* Linnaeus, Sp. Pl. 1: 990. 1753 (Amaranthaceae).

Purple amaranth (凹头苋), native to the Mediterranean region and naturalized in other parts of the world including much of eastern North America, is reported as *Amaranthus lividus* (Liu et al., 2006; Xu et al., 2006; Dong and Ye, 2007; Li et al., 2007; Wang et al., 2007a; Zhu et al., 2007; Peng et al., 2008; Song et al., 2009; Niu and Li, 2010; Gao and Cao, 2010) in China: Anhui, Fujian, Gansu, Guangdong, Guangxi, Guizhou, Hainan, Hebei,

Heilongjiang, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Jilin, Liaoning, Shaanxi, Shandong, Shanxi, Sichuan, Taiwan, Xinjiang, Yunnan and Zhejiang.

4. *Amaranthus hybridus* Linnaeus, Sp. Pl. 2: 990. 1753; B. J. Bao, S. E. Clemants & T. Borsch in Fl. Chin. 5: 427. 2003 (Amaranthaceae).

Slim amaranth (绿穗苋) was originally a pioneer plant in eastern North America, and it has been reported in Bhutan, Japan, Laos, Nepal, Sikkim, Vietnam, Europe, North and South America as well, naturalized in many places of warmer climate, and widespread in China: Anhui, Fujian, Guizhou, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Shaanxi, Sichuan and Zhejiang. *Amaranthus chlorostachys* has been suggested as subspecies of *A. hybridus*, while some authors treated it as *A. hybridus* (Chen et al., 2003; Wei et al., 2006a; Yang, 2009).

5. *Amaranthus tricolor* Linnaeus, Sp. Pl. 2: 989. 1753; B. J. Bao, S. E. Clemants & T. Borsch in Fl. Chin. 5: 420. 2003. Syn. *A. mangostanus* Linnaeus, Cent. Pl. I. 1: 32. 1755 (Amaranthaceae).

Three-colored amaranth (苋), probably native to tropical Asia, is treated as *Amaranthus mangostanus* (Sun et al., 2009). It is widely cultivated in China: Anhui, Beijing, Chongqing, Fujian, Gansu, Guangdong, Guangxi, Hainan, Hebei, Heilongjiang, Hubei, Hunan, Jiangsu, Jiangxi, Jilin, Inner Mongolia, Liaoning, Macau, Ningxia, Qinghai, Shaanxi, Shandong, Shanghai, Shanxi, Sichuan, Taiwan, Tianjin, Xinjiang, Xizang, Yunnan and Zhejiang.

6. *Basella alba* Linnaeus, Sp. Pl. 1: 272. 1753; D. Q. Lu & M. G. Gilbert in Fl. Chin. 5: 445. 2003. Syn. *Basella rubra* Linnaeus in Sp. Pl. 1: 272. 1753 (Basellaceae).

^③ Y. L. Chen, T. Kawahara & N. Hind, Asteraceae, in Fl. Chin. 20 (unpublished, online: http://flora.huh.harvard.edu/china/mss/volume20/Asteraceae-AGH-Eupatorieae_coauthoring.htm).

^④ Flora of North America recorded as *Alternanthera bettziciana*.

Ceylon spinach (落葵), a pantropical species, is treated as *Basella rubra* (Chen, 2008), widely cultivated in China and naturalized in South China: Gongdong, Guangxi, Hainan, Hong Kong, Macau and Zhejiang.

7. *Chromolaena odorata* (Linnaeus) R. M. King & H. Robinson, Phytologia. **20**: 204. 1970^⑤; G. L. Nesom in Fl. N. Amer. **21**: 544. 2006. Basionym *Eupatorium odoratum* Linnaeus, Syst. Nat., ed. 10, 1205. 1759 (Asteraceae).

Jack in the bush (飞机草), a species native to North America, from Florida and Texas to Mexico and the Caribbean, widely naturalized in tropical Asia, introduced into Hainan of China during World War II. It is a destructive invasive alien in the field because of very strong ability in propagation and has been naturalized and invasive in many places of China: Fujian, Guangdong, Guangxi, Guizhou, Hainan, Hong Kong, Macau, Sichuan, Taiwan and Yunnan.

Chromolaena is here followed *Flora of North America* and *Flora of China*. However, it has frequently been used as *Eupatorium odoratum* in the Chinese works (Li and Xie, 2002; Zeng, 2003; Xu and Qiang, 2004; Wang et al., 2004; Guan et al., 2006; Wei et al., 2006a, b; Xu et al., 2006; Xu and Lu, 2006; An et al., 2007; Ning et al., 2007; Wang et al., 2007b; Xie et al., 2007b; Fan et al., 2008; Liu et al., 2008; Qin et al., 2008; Tang et al., 2008; Wang et al., 2008; Zhao et al., 2008; Zhou et al., 2008; Long, 2009; Ma et al., 2009).

8. *Cucumis melo* Linnaeus, Sp. Pl. **2**: 1011. 1753^⑥.
Syn. *Cucumis bisexualis* Bull. Bot. Res., Harbin. **4** (2): 126–127, f. 1–6. 1984 (Cucurbitaceae).

Cantaloupe (甜瓜), native to Old World tropics and subtropics, widely cultivated in tropical and

temperate countries, adventive in New World tropics, but wide cultivated and escaped in China: Anhui, Henan, Hunan, Jiangsu, Liaoning, Shandong and Shanxi, but is treated as *Cucumis bisexualis* (Xu et al., 2004; Zhu et al., 2007; He and Ge, 2008). Xu and Qiang (2004) also treated *C. melo* and *C. bisexualis* as two species separately.

9. *Dysphania ambrosioides* (Linnaeus) Mosyakin & Clemants, Ukrayinsk. Bot. Zhurn. **59**: 382. 2002; G. L. Chu, S. L. Mosyakin & S. E. Clemants in Fl. Chin. **5**: 377. 2003. Basionym *Chenopodium ambrosioides* Linnaeus, Sp. Pl. **1**: 219. 1753 (Chenopodiaceae).

Mexican-tea (土荆芥), native to tropical America, widely naturalized in tropical, subtropical, and warm-temperate regions of the world, naturalized and often cultivated for medicine in China: Fujian, Guangdong, Guangxi, Hunan, Jiangsu, Jiangxi, Sichuan, Taiwan, Yunnan and Zhejiang. *Dysphania* is accepted here in sensu lato (Mosyakin and Clemants, 2002), including all other “glandular” taxa previously treated in *Chenopodium* subg. The species is widely accepted as *Chenopodium ambrosioides* in China (Li and Xie, 2002; Deng and Lu, 2004; Liu and Qin, 2004; Shi et al., 2004; Wang et al., 2004; Xu and Qiang, 2004; Yan et al., 2004; Hu et al., 2005; Tian et al., 2005; Ding et al., 2006; Guan et al., 2006; Ou and Lu, 2006; Shi et al., 2006; Song et al., 2006; Wei et al., 2006a, b; Wu et al., 2006; Xu and Lu, 2006; Dong and Ye, 2007; Hu et al., 2007; Li et al., 2007; Lin and Wang, 2007; Tan et al., 2007; Wang et al., 2007b; Xie et al., 2007a, b; Zhao, 2007; Zhu et al., 2007; Chen et al., 2008; He and Ge, 2008; Jiang et al., 2008; Li et al., 2008; Liu et al., 2008; Luo, 2008; Peng et al., 2008, 2009; Wang

⑤ Y. L. Chen, T. Kawahara & N. Hind, Asteraceae in Fl. Chin. 20 (unpublished, online: http://flora.huh.harvard.edu/china/mss/volume20/Asteraceae-AGH-Eupatorieae_coauthoring.htm).

⑥ A. M. Lu & C. Jeffrey, Cucurbitaceae in Fl. Chin. 19 (unpublished, online: http://flora.huh.harvard.edu/china/mss/volume19/Cucurbitaceae-MO_reviewing.htm).

et al., 2008; Yang *et al.*, 2008; Zhou *et al.*, 2008; Ji *et al.*, 2009; Jiang *et al.*, 2009; Li *et al.*, 2009; Ma *et al.*, 2009; Shu *et al.*, 2009; Tang *et al.*, 2008; Sun *et al.*, 2009; Xu *et al.*, 2009; Yang and Chen, 2009; Yu *et al.*, 2009; Zeng *et al.*, 2009; Zhang and Zhang, 2009; Ge *et al.*, 2010; He *et al.*, 2010; Qi *et al.*, 2010; Wang, 2010; Zhang *et al.*, 2010).

10. *Euphorbia maculata* Linnaeus, Sp. Pl. **1:** 455. 1753; J. S. Ma & M. G. Gilbert in Fl. Chin. **11:** 296. 1997. Syn. *Euphorbia supina* Rafinesque in Amer. Monthly Mag. & Crit. Rev. **2** (2): 119. 1817 (Euphorbiaceae).

Spotted sandmat (斑地錦), a species native to North America and naturalized in China: Hebei, Henan, Hubei, Jiangsu, Jiangxi, Taiwan and Zhejiang, is treated as *Euphorbia supina* (Liu *et al.*, 2002; Li *et al.*, 2008; Yang *et al.*, 2009; Dong *et al.*, 2010).

11. *Ipomoea alba* Linnaeus, Sp. Pl. **1:** 161. 1753; R. C. Fang & G. Staples in Fl. Chin. **16:** 309. 1995. Syn. *Calonyction aculeatum* (Linnaeus) House, Bull. Torrey Bot. Club. **31** (11): 590. 1904 (Convolvulaceae).

Tropical white morning-glory (月光花), a species of night-blooming morning-glory, native to tropical and subtropical regions of the New World, from northern Argentina north to Mexico and Florida, cultivated and also naturalized in Indonesia, Japan (Ryukyu Islands), Malaysia, Myanmar, Nepal, New Guinea, Philippines, Sri Lanka, Thailand and Pacific Islands, was used as *Calonyction aculeatum* (Yan *et al.*, 2007; Chen, 2008; Zeng *et al.*, 2009; Qi *et al.*, 2010). This species is widely cultivated as an ornamental plant for its flowers in China: Guangdong, Guangxi, Hainan, Jiangsu, Jiangxi, Shaanxi, Sichuan, Yunnan and Zhejiang.

12. *Ipomoea nil* (Linnaeus) Roth, Catal. Bot. **1:** 36. 1797. R. C. Fang & G. Staples in Fl. Chin.

16: 305. 1995. Basionym *Convolvulus nil* Linnaeus, Sp. Pl. ed. 2. **1:** 219. 1762. Syn. *Ipomoea hederacea* (Linnaeus) Jacquin, C. B. Clarke in Hook. f. Fl. Brit. Ind. **4:** 199. 1883; *Pharbitis nil* (Linnaeus) Choisy in Mém. Soc. Phys. Genève. **6:** 439–440. 1833 (Convolvulaceae).

Whiteedge morning-glory (牵牛) has been treated either as *Pharbitis hederacea* (Ma *et al.*, 2009; Qi *et al.*, 2010) or *Ipomoea hederacea* (Chen *et al.*, 2006), or was frequently recorded as *Pharbitis nil* (Yan *et al.*, 2004, 2005; Chen, 2005; Ding *et al.*, 2006; Qu *et al.*, 2006a, b; Jiang *et al.*, 2008; Zhou *et al.*, 2008; Chen, 2008; Zeng *et al.*, 2009). Native to South America, it now nearly cultivated as an attractive ornamental plant in many pantropical places, and the descendants of garden escapes now grows in China: Anhui, Fujian, Guangdong, Guangxi, Guizhou, Hainan, Hebei, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Inner Mongolia, Ningxia, Shaanxi, Shandong, Shanxi, Sichuan, Taiwan, Xizang, Yunnan and Zhejiang.

13. *Ipomoea quamoclit* Linnaeus, Sp. Pl. **1:** 159–160. 1753; R. C. Fang & G. Staples in Fl. Chin. **16:** 301. 1995. Syn. *Quamoclit pennata* (Desr.) Bojer, Hortus Maurit. 224. 1837 (Convolvulaceae).

Cypressvine (茑萝), native to tropical regions of the New World from northern South America to Mexico, is reported as *Quamoclit pennata* (Li, 1992; Qu *et al.*, 2006a, b; Wang, 2008; Qi *et al.*, 2010). It is widely cultivated as ornamental plant throughout the tropics and also outside of tropical regions, cultivated and escapes from gardens in China: Guangdong, Hebei, Liaoning, Shaanxi and Zhejiang.

14. *Lablab purpureus* (Linnaeus) Sweet, Hort. Brit. 481. 1826; T. L. Wu & M. Thulin in Fl. Chin. **10:** 253. 2010. Syn. *Dolichos lablab* Linnaeus in Fl. Galápagos Isl. i–xx, 1–998. 1971 (Fabaceae).

Hyacinth Bean (扁豆), native to Africa, cultivated throughout the tropics, widely cultivated in China: Beijing, Chongqing, Hainan, Hebei, Hong

Kong, Shaanxi and Zhejiang, is treated as *Dolichos lablab* (Liu et al., 2002; Sun et al., 2009).

15. *Leucaena leucocephala* (Lamarck) de Wit, Taxon **10**: 54. 1961; T. L. Wu & I. C. Nielsen in Fl. Chin. **10**: 53. 2010. Basionym *Mimosa leucocephala* Lamarck, Encycl. **1**: 12. 1783. Syn. *Leucaena glauca* Bentham, J. Bot. (Hooker). **4** (32): 416. 1842 (Fabaceae).

White leadtree (银合欢) originally from tropical America, widely distributed in tropical and subtropical regions, cultivated and naturalized for use as green manure and fodder in China: Fujian, Guangdong, Guangxi, Guizhou, Hainan, Taiwan and Yunnan, is treated as *Leucaena glauca* (Peng et al., 2008; Qin et al., 2008).

16. *Medicago polymorpha* Linnaeus, Sp. Pl. **2**: 779. 1753; Z. Wei & M. A. Vincent in Fl. Chin. **10**: 557. 2010. Syn. *Medicago hispida* in Fruct. Sem. Pl. **2**: 349, pl. 155. 1791 (Fabaceae).

Burclover (南苜蓿), annual or biennial herbs, native at least to N Africa, SW Asia, and S Europe, widely cultivated or escaped to elsewhere fields, including China: Anhui, Fujian, Gansu, Guangdong, Guangxi, Guizhou, Hainan, Hubei, Hunan, Jiangsu, Jiangxi, Shaanxi, Sichuan, Taiwan, Yunnan and Zhejiang. However, it was commonly accepted as *Medicago hispida* in China (Liu and Qin, 2004; Xu and Qiang, 2004; Lu et al., 2005; Yi et al., 2005; Shi et al., 2006; Wang et al., 2007a; Chen et al., 2008; He and Ge, 2008; Wang, 2008; Zhou et al., 2008; Ji et al., 2009; Ma et al., 2009; Ge et al., 2010; Wang, 2010).

17. *Melinis repens* (Willdenow) Zizka, Biblioth. Bot. **138**: 55. 1988; S. L. Chen & S. M. Phillips in Fl. Chin. **22**: 539, 2006. Basionym *Saccharum repens* Willdenow, Sp. Pl., ed. 4, **1**: 322. 1797. Syn. *Rhy-*

nchelytrum repens (Willdenow) C. E. Hubbard, Bull. Misc. Inform. Kew **1934** (3): 110. 1934 (Poaceae).

Rose Natal grass (红毛草), native to Africa, naturalized in China: Fujian, Guangdong, Hainan, Hong Kong, Macau, Taiwan and Yunnan, is a polymorphic and pantropical weed, recognizable by its pink, fluffy panicles. However, it was widely accepted as *Rhynchelytrum repens* in China (Li and Xie, 2002; Wang et al., 2004; Chen, 2005; Yan et al., 2004, 2005; Li et al., 2006; An et al., 2007; Fan et al., 2008; Jiang et al., 2008; Qin et al., 2008; Lin et al., 2008; Wang et al., 2008; Yang and Chen, 2009).

18. *Mimosa bimucronata* (Candolle) O. Kuntze, Revis. Gen. Pl. **1**: 198. 1891; T. L. Wu & I. C. Nielsen in Fl. Chin. **10**: 53, 2010. Basionym *Acacia bimucronata* Candolle, Prodr. **2**: 469. 1825. Syn. *Mimosa sepiaria* Bentham. Britton, N. Amer. Fl. **23** (3): 137–194. 1928 (Fabaceae).

Smooth pod mimic (光荚含羞草), native to South America (NE Argentina and E Brazil), introduced to Guangdong, escaped in spare forests of Guangxi, Hainan and Yunnan of China. It has been treated as *Mimosa sepiaria* (Ding et al., 2006; Xie et al., 2007b; Ye et al., 2008). Fan et al. (2008) also used as “*Mimosa sphyaria*”, the name first used by Liu (2006) in his doctoral dissertation, but never existed in nomenclature.

19. *Mukia maderaspatana* (Linnaeus) M. J. Roemer, Fam. Nat. Monogr. **2**: 47. 1846^⑦. Syn. *Coccinia cordifolia* (Linnaeus) Cogniaux, Monogr. Phan. **3**: 529. 1881 (Cucurbitaceae).

Ivy gourd (帽儿瓜), native to old tropical and subtropical and Australia, is accepted as *Coccinia cordifolia* in China: Guangdong, Guangxi, Guizhou, Taiwan and Yunnan (Xu and Qiang, 2004; Wang et al., 2007b).

^⑦ A. M. Lu & C. Jeffrey, Cucurbitaceae in Fl. Chin. 19 (unpublished, online: http://flora.huh.harvard.edu/china/mss/volume19/Cucurbitaceae-MO_reviewing.htm).

20. *Oenothera stricta* Ledebour ex Link, Enum. Pl. Hort. Berol. **1**: 377. 1821; J. R. Chen, P. C. Hoch & W. L. Wagner in Fl. Chin. **13**: 426. 2007 (Onagraceae).

Chilean evening primrose (待宵草), native to South America (Chile and Argentina), naturalized in Africa, SW Asia, Australia, Europe, North America and Pacific islands, usually escaped from cultivation and sometimes cultivated for its relatively large, attractive flowers, often becomes naturalized in China and elsewhere: Fujian, Guangxi, Guizhou, Hubei, Jiangxi, Shaanxi, Shandong, Sichuan, Taiwan and Yunnan.

Many reports from China have been determined as *Oenothera odorata* Jacquin (Yi *et al.*, 2005; Zhao and Dong, 2007; Chen, 2008; Qi *et al.*, 2010), however, the later, also native to S South America but rarely, if ever, naturalized elsewhere, differs from *O. stricta* by having narrower leaves, larger petals that lacks a red spot at the base, shorter floral tubes, and bracts mostly longer than the capsules they subtend.

21. *Opuntia dillenii* (Ker Gawler) Haworth, Suppl. Pl. Succ. 79. 1819; Z. Y. Li & N. P. Taylor in Fl. Chin. **13**: 210. 2007. Basionym *Cactus dillenii* Ker Gawler, Bot. Reg. **3**: t. 255. 1818. Syn. *Opuntia stricta* (Haworth) Haworth var. *dillenii* (Ker Gawler) L. Benson, in Cact. Succ. J. (Los Angeles), **41** (3): 126. 1969 (Cactaceae).

Erect prickly pear (仙人掌), native to the Caribbean region, widely introduced and naturalized in tropical regions, is treated as *Opuntia stricta* var. *dillenii* in China (Xu *et al.*, 2006; An *et al.*, 2007; Xie *et al.*, 2007b; Fan *et al.*, 2008; Qin *et al.*, 2008; Tang *et al.*, 2008; Wang *et al.*, 2008; Yang *et al.*, 2008; Yan and Chen, 2009). The species was first recorded in China in 1702, and now widely spread in China: Chongqing, Fujian,

Guangdong, Guangxi, Hainan, Hong Kong, Hunan, Macau, Shandong, Yunnan and Zhejiang.

22. *Paspalum distichum* Linnaeus, Syst. Nat., ed. 10, **2**: 855. 1759; S. L. Chen & S. M. Phillips in Fl. Chin. **22**: 528. 2006. Syn. *Paspalum paspaloides* (Michaux) Scribner, Mem. Torrey Bot. Club **5** (3): 29. 1894 (Poaceae).

Knot grass (双穗雀稗), a monocot, is native to California and is also found elsewhere in North America, tropical and warm-temperate regions of the world, including China: Anhui, Fujian, Guangxi, Guizhou, Hainan, Henan, Hong Kong, Hubei, Hunan, Jiangsu, Shandong, Sichuan, Taiwan, Yunnan and Zhejiang. The length of the lower glumes is very variable in this species, even within a single raceme. It is reported as *Paspalum paspaloides* (Guan *et al.*, 2006).

23. *Praxelis clematidea* R. M. King & H. Robinson, Phytologia. **20**: 194. 1970^⑧. Syn. *Eupatorium catarium* Veldkamp, Gard. Bull. Singapore **51**: 121. 1999 (Asteraceae).

Praxelis (假臭草), widespread in South America, becoming weedy in many cultivated areas, has been introduced and becoming naturalized in Northern Australia and Asia (Fujian, Guangdong, Guangxi, Hainan, Hong Kong, Macau and Taiwan of China). It was commonly accepted as *Eupatorium catarium* (Li and Xie, 2002; Wang *et al.*, 2004; Yan *et al.*, 2004, 2005; Chen, 2005; Li *et al.*, 2006; Ou and Lu, 2006; Zheng *et al.*, 2006; An *et al.*, 2007; Cao *et al.*, 2007; Ning *et al.*, 2007; Wang *et al.*, 2007b; Chen *et al.*, 2008; Fan *et al.*, 2008; Jiang *et al.*, 2008; Lin *et al.*, 2008; Qin *et al.*, 2008; Wang *et al.*, 2008; Yang and Chen, 2009; Zeng *et al.*, 2009).

24. *Senna tora* (Linnaeus) Roxburgh, Fl. Ind., ed. **2**: 340. 1832; T. C. Chen, D. X. Zhang & K.

^⑧ Y. L. Chen, T. Kawahara & N. Hind, Asteraceae in Fl. Chin. 20 (unpublished, online: http://flora.huh.harvard.edu/china/mss/volume20/Asteraceae-AGH-Eupatorieae_coauthoring.htm).

Larsen in Fl. Chin. **10**: 32. 2010. Basionym *Cassia tora* Linnaeus, Sp. Pl. **1**: 376. 1753. Syn. *C. obtusifolia* L., Ann. Missouri Bot. Gard. **38** (1): 1–94. 1951 (Fabaceae).

Sickle senna (决明) has been widely accepted either as *Cassia tora* (Ng and Richard, 2002; Deng and Lu, 2004; Tian and Lü, 2004; Wang et al., 2004; Xu and Qiang, 2004; Yan et al., 2004; Ding et al., 2006; Guan et al., 2006; Liu et al., 2006; Qi and Xu, 2006; Shi et al., 2006; Song et al., 2006; Wei et al., 2006a; An et al., 2007; Qin et al., 2007; Wang et al., 2007; Chen et al., 2008; Fan et al., 2008; He and Ge, 2008; Jiang et al., 2008; Luo and Liu, 2008; Peng et al., 2008, 2009; Qin et al., 2008; Wang, 2008; Zhou et al., 2008; Chen et al., 2009; Li et al., 2009; Ma et al., 2009; Shu et al., 2009; Xu et al., 2009; Zeng et al., 2009; Zhang and Zhang, 2009; Zhang et al., 2010), or *Cassia obtusifolia* (He et al., 2010). It is native to tropical America and widely cultivated in the tropics, subtropics and China: Anhui, Fujian, Guangdong, Guangxi, Guizhou, Hainan, Hebei, Hong Kong, Hunan, Jiangsu, Liaoning, Macau, Shandong, Shanghai, Sichuan, Taiwan, Yunnan and Zhejiang.

25. *Solanum aculeatissimum* Jacquin, Collectanea **1**: 100. 1787; Z. Y. Zhang, A. M. Lu & W. G. D'Arcy in Fl. Chin. **17**: 323. 1994. Syn. *Solanum khasianum* C. B. Clarke, Fl. Brit. India **4** (10): 234. 1883 (Solanaceae).

Indian nightshade (喀西茄), probably native to Brazil, widespread in old tropical and China: Fujian (Xiamen), Guangxi, Guizhou, Hunan, Jiangxi, Sichuan, Xizang, Yunnan and Zhejiang (Pingyang), is recorded as *Solanum khasianum* (Ding et al., 2006; Qin et al., 2008).

26. *Solidago canadensis* Linnaeus, Sp. Pl. **2**: 879.

1753^⑨. Syn. *Solidago altissima* Linnaeus, Monogr. Syst. Bot. Missouri Bot. Gard. **85**: i-xlii, 1–2666. 2001 (Asteraceae).

Canada goldenrod (加拿大一枝黄花), an ornamental and decorative plant, native to North America, widely cultivated in gardens and parks in China: Anhui, Beijing, Fujian, Gansu, Guangxi, Hebei, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Jilin, Liaoning, Shaanxi, Shanghai, Shanxi, Sichuan, Yunnan and Zhejiang. It is one of the worst weeds and most widespread invasive species in China, but is treated as *Solidago altissima* (Peng et al., 2008).

27. *Spermacoce latifolia* Aublet, Hist. Pl. Guiane **1**: 55, t. 19/1. 1775. Syn. *Borreria latifolia* (Aublet) K. Schum in Fl. Bras. **6** (6): 61, t. 80. 1888 (Rubiaceae).

Button weed (阔叶丰花草), a native species found in South America, introduced to Guangdong, naturalized in wastelands of China: Fujian, Guangdong, Guangxi, Hainan, Hong Kong, Hunan, Macau, Taiwan, Yunnan and Zhejiang, is treated as *Borreria latifolia* (Li et al., 2006; Zheng et al., 2006; An et al., 2007; Wang et al., 2008).

28. *Sympytum officinale* Linnaeus, Sp. Pl. **1**: 136. 1753; G. L. Zhu, H. Riedl & R. Kamelin in Fl. Chin. **16**: 359. 1995. Syn. *Sympytum peregrinum* Ledeb, Ind. Sem. Hort. Dorp. 4. 1820 (Boraginaceae).

Comfrey (聚合草), native to Europe, is known elsewhere, including North America, was introduced in 1963 in China: Fujian, Hebei, Liaoning, Taiwan and Xinjiang as green forage for livestock, but was reported as *Sympytum peregrinum* (Li, 1981, 1992; Qu et al., 2006a, b).

29. *Veronica polita* Fries, Novit. Fl. Suec. **5**: 63. 1817. D. Y. Hong & M. A. Fischer in Fl. Chin.

^⑨ Y. L. Chen, L. Brouillet & J. C. Semple, Asteraceae in Fl. Chin. 20 (unpublished online: http://flora.huh.harvard.edu/china/mss/volume20/Asteraceae-MO-Astereae_coauthoring.htm).

18: 70. 1998. Syn. *Veronica didyma* Tenore., Sosud. Rast. SSSR. 509. 1981 (Scrophulariaceae).

Grey field-speedwell (婆婆纳), native in SW Asia and naturalized over most of the world, is treated as *Veronica didyma* (Liu and Qin, 2004; Tian et al., 2005; Xie et al., 2007b; Zhu et al., 2007; Li et al., 2008; Shu et al., 2009; Zhang, 2009), widely spread in China: Anhui, Beijing, Fujian, Gansu, Guizhou, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Qinghai, Shaanxi, Sichuan, Taiwan, Xinjiang, Yunnan and Zhejiang.

30. *Waltheria indica* Linnaeus, Sp. Pl. 2: 673. 1753; Y. Tang, M. G. Gilbert & L. J. Don in Fl. Chin. 12: 321. 2007. Syn. *Waltheria americana* Linnaeus in Sp. Pl. 2: 673. 1753 (Sterculiaceae).

Uhaloa (蛇婆子), pantropical species, is believed to have originated from the Neotropics, and is treated as *Waltheria americana* (An et al., 2007; Wang et al., 2008) in south China: Fujian, Guangdong, Guangxi, Hainan, Hong Kong, Macau, Taiwan and Yunnan.

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